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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/807,663 | 03/24/2004 | James John Klocinski | 10541-1952 | 4309 |

7590 12/13/2005

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| EXAMINER |
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NGUYEN, TUYEN T

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| ART UNIT | PAPER NUMBER |
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2832

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,663

Applicant(s)

KLOCINSKI ET AL.

Examiner

TUYEN T. NGUYEN

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 18-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/24/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of group I, claims 1-17 in the reply filed on 10-5-2005 is acknowledged. The species restriction is withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 3, there is no antecedent basis for "the inner chamber."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7-8 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Heritier-Best [US 4,843,362].

Heritier-Best discloses an ignition coil [figures 1-3] comprising:

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- a core structure including inner and outer core elements [2, 3, 4], wherein the inner core element positioned inside the outer core element;

- a coil assembly [figures 1-2] mounted to the inner core, the coil assembly including primary and secondary windings [11, 21] concentrically positioned relative to each other, the coil assembly positioned inside the outer core;

- a casing structure having a bottom wall connected to an outer wall [50] extending around the periphery of the casing and an inner wall [40] extending along the inner periphery of the outer core and positioned between the outer core and the coil assembly, wherein the outer core element positioned inside the outer wall of the casing structure and the inner wall is not integrally formed with the outer core; and

- a first encapsulate material [42] filling at least a portion of the casing structure and covering the coil assembly, the inner wall separating the outer core from direct contact with the first encapsulate material in the vicinity of the coil assembly.

Regarding claim 3, Heritier-Best discloses the inner wall defines an inner compartment and the inner and outer walls define an outer compartment therebetween, the inner compartment being filled with the first encapsulate material.

Regarding claim 4, Heritier-Best discloses the outer compartment is filled with a second material [51].

Regarding claim 7, Heritier-Best discloses the inner wall extends between the inner core and the outer core to form an air gap therebetween [figure 1].

Regarding claim 8, Heritier-Best discloses the inner core includes first and second ends, each end positioned proximate to the outer core, wherein the inner wall extends between the first end of the inner core and the outer core to form the air gap [figure 1].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-6, 9, 11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heritier-Best.

Regarding claims 5-6, the specific material of the second material would have been an obvious design consideration for the purpose of providing insulation.

Regarding claim 9, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the inner wall also extend between the second end of the inner core element and outer core element of Heritier-Best for the purpose of providing additional air gap and controlling magnetic flux.

Regarding claim 11, the specific reduced thickness of the inner wall would have been an obvious design consideration for the purpose of controlling the air gap.

Regarding claim 16, Heritier-Best discloses the claimed invention except for the inner wall integrally formed with the housing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to integrally form the inner wall with the housing

structure of Heritier-Best, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. Howard v. Detroit Stove Works, 150 U.S. 164 (1893).

Regarding claims 13-15, the specific extending position of the inner wall would have been an obvious design consideration for the purpose of improving separation between the first encapsulate material and the outer core element.

Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heritier-Best in view of Suzuki et al. [US 5,685,065].

Heritier-Best discloses the instant claimed invention except for a permanent magnet.

Suzuki et al. discloses a permanent magnet [5] between an inner core [2] and an outer core [3].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include a permanent magnet between the inner and outer core elements of Heritier-Best, as suggested by Suzuki et al., for the purpose of enhancing magnetic field.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T. NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN *TIN*

Junglin Nguyen